

HF-01SG

Soil & Ground Heat Flux Sensor

Make Root-zone Heating Measurable, Not Assumed.

Using soil heat flux measurement to improve greenhouse climate control, energy efficiency, and system optimization.



Energy optimisation

Identify when additional heating stops improving root temperature and becomes energy loss. Avoid unnecessary heating runtime.

Improved control response

Reduce unnecessary soil heat storage, enabling faster and more predictable temperature regulation.

Irrigation impact awareness

Quantify how soil moisture increases thermal conductivity and heating demand.

Uniformity between greenhouse zones

Detect uneven heat distribution caused by pipe depth, insulation gaps, or soil variability.

Commissioning and installation validation

Verify that heating design and pipe layout deliver the intended energy distribution.

Early detection of system drift

Monitor long-term changes caused by soil compaction, insulation degradation, or structural changes.

Data-driven troubleshooting

Distinguish between increased heating demand caused by crop factors versus thermal losses. Demonstrate measurable system performance to clients or investors.

